



**Southern New Hampshire PFOA  
Investigation: Public Update  
in  
Litchfield, NH  
April 7, 2016**

# Agenda

- **Introduction**
  - Clark Freise, Assistant Commissioner
- **Testing, Results, and Filtering Discussion**
  - Brandon Kernen, Manager, Hydrology/Conservation
- **Variability, Enhanced Water Delivery, and Crop Discussion**
  - Clark Freise, Assistant Commissioner
- **Questions and Answers (written)**
  - Hand to Rick during presentation**
    - John Regan, Town Moderator
- **Informal Q&A (verbal)**
  - John Regan, Town Moderator



# Testing, Results, and Filtering Discussion

Brandon Kernen

Manager of Hydrology and Conservation, Drinking Water  
and Groundwater Bureau

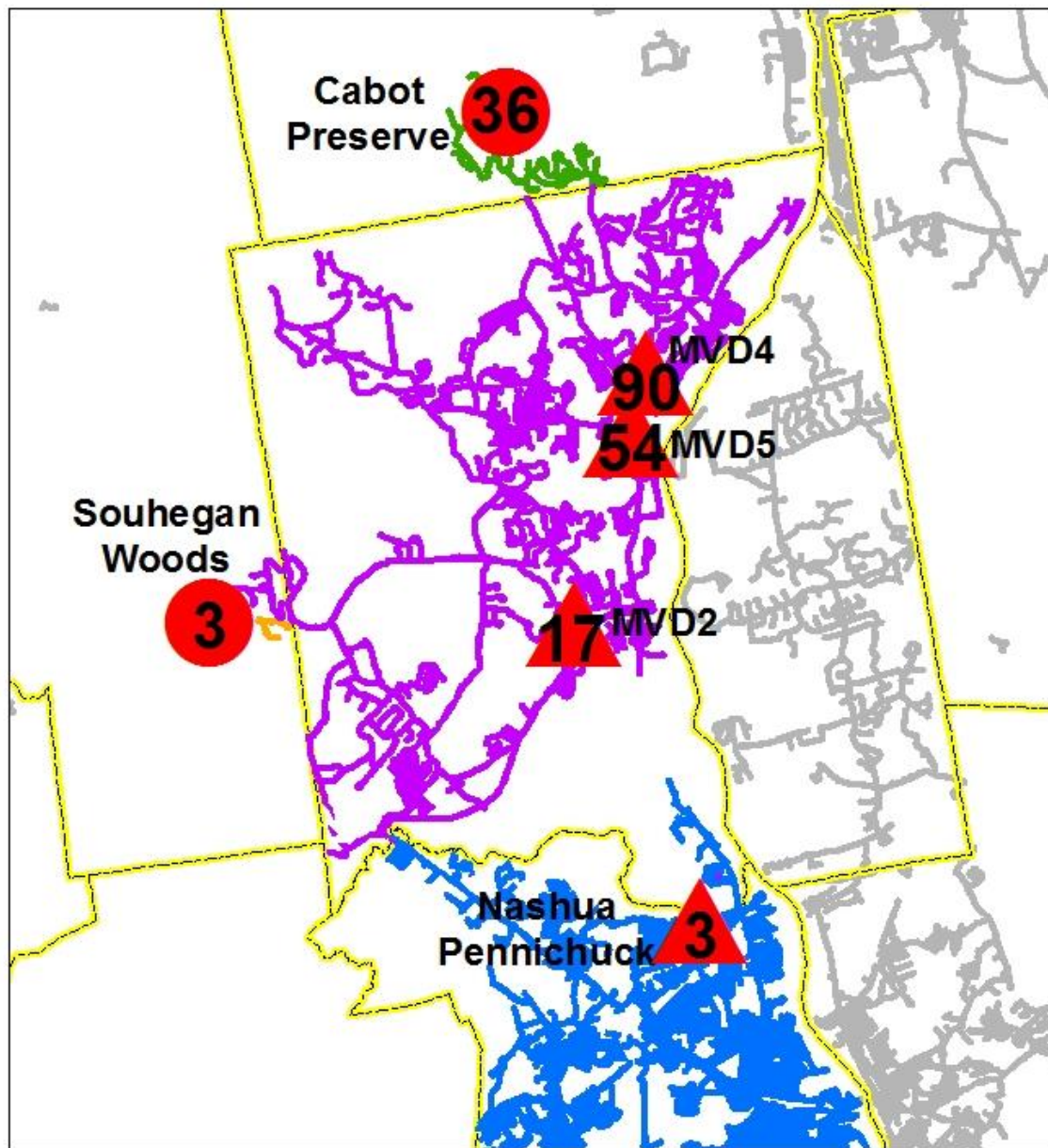


# Public Notice and Testing

- ▶ March 4<sup>th</sup> - Press release (initial detect at St.-Gobain)
- ▶ Additional press releases
  - March 10<sup>th</sup>, March 18<sup>th</sup>, March 29<sup>th</sup>, March 31<sup>st</sup>
- ▶ March 9<sup>th</sup>- Sampling of MVD's wells & initial door-to-door sampling
- ▶ Ongoing sampling
  - Door-to-door, sign-up lists, press releases, direct mailing to everyone (1600 mailings)
- ▶ On-going verbal notification to well owners & delivery of bottled water
- ▶ Weekly sampling of all active MVD sources is occurring
- ▶ Sampling of bottled water
- ▶ Week of April 18<sup>th</sup> – Sample results will be mailed

# Drinking Water Well Sampling

Town	Wells Sampled	Wells Scheduled	Wells Remaining	Total Number of Wells
Merrimack	16	1	9	26
Litchfield	166	17	45	228



## PFOA INVESTIGATION

Political Boundary

### Public Water Supplies

Water Distribution

MVD

Nashua System

Cabot / Greenfield

Souhegan Woods

Sample Result (PPT)  
Water Source

Sample Result PPT  
Redistribution



3/9/16 Public Water Supply Testing Results  
3/31/16 Results Pending

# PFOA INVESTIGATION



Area of  
Investigation

Political Boundary

## Public Water Supplies

Water Distribution

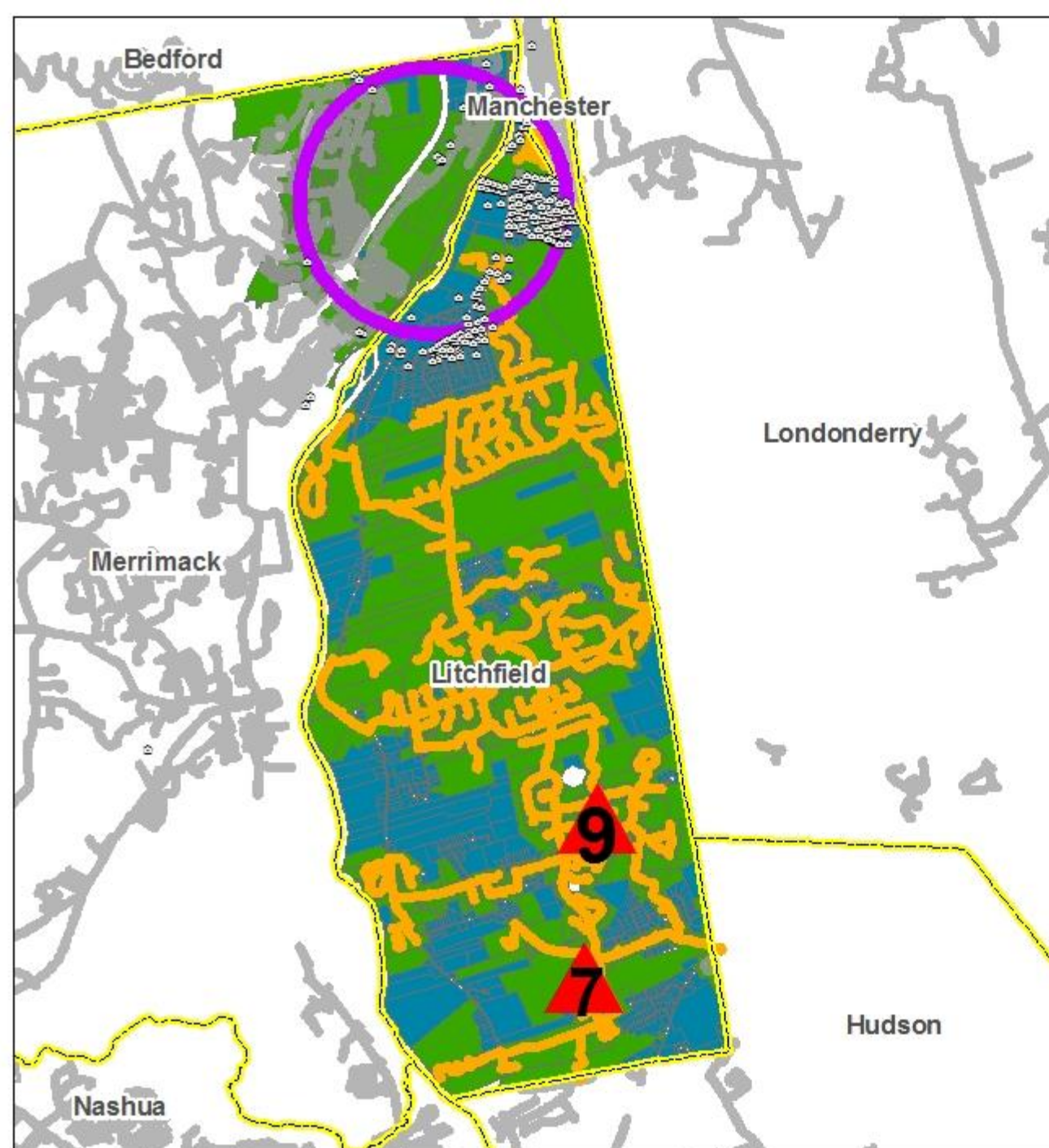
Litchfield System

Connected to PWS

Private Well Likely

Samples Collected

Sample Result (PPT)  
Water Source



# PFOA INVESTIGATION



Area of Investigation

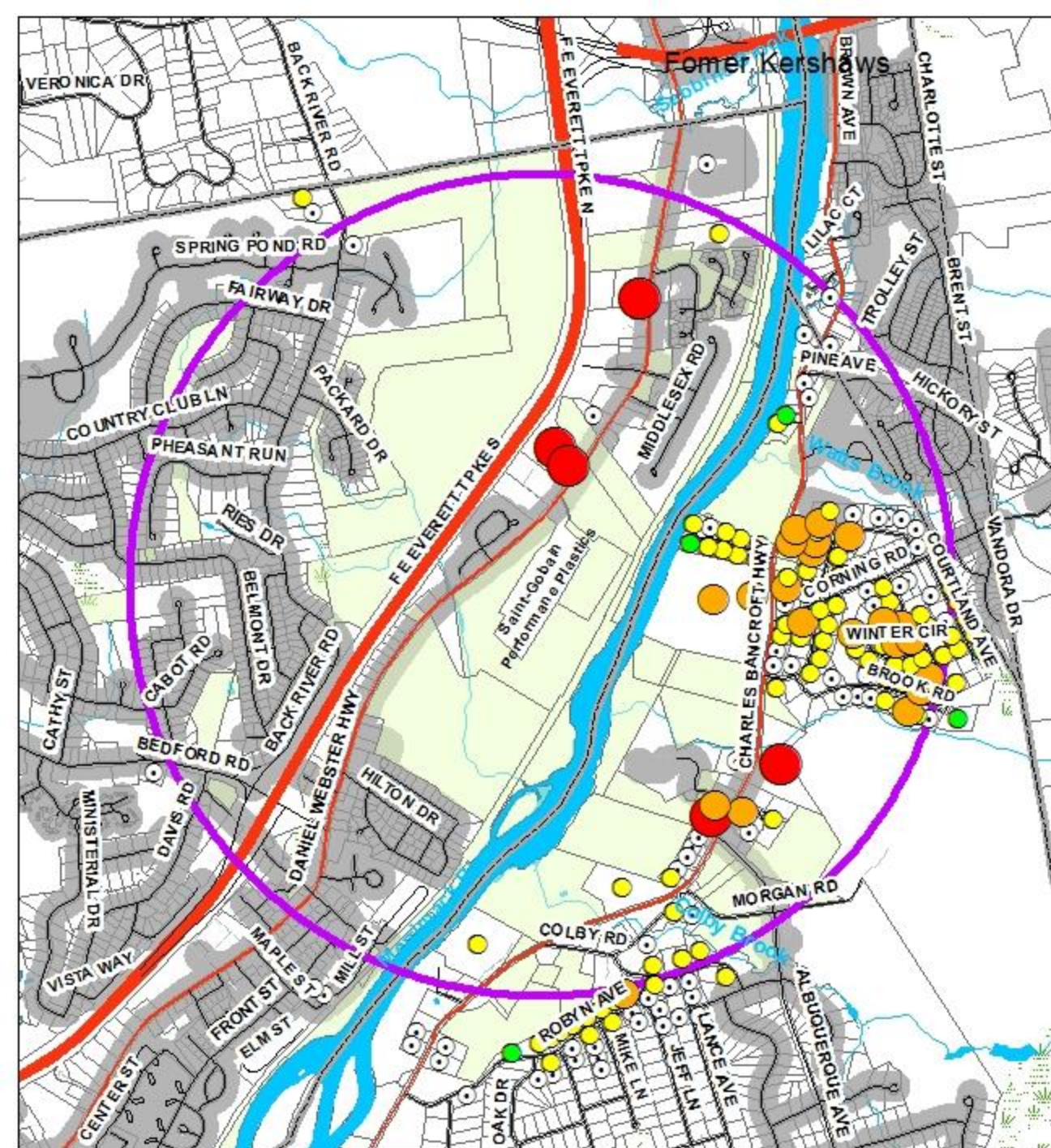
## PFOA (PPT)

- Red circle:  $\geq 400$
- Orange circle: 100-399
- Yellow circle:  $< 100$
- Green circle: Non Detect ( $< 2$ )
- Circle with dot: Result Pending

Not Developed

## Public Water Supplies

- Grey rectangle: Water Distribution
- White rectangle: Political Boundary





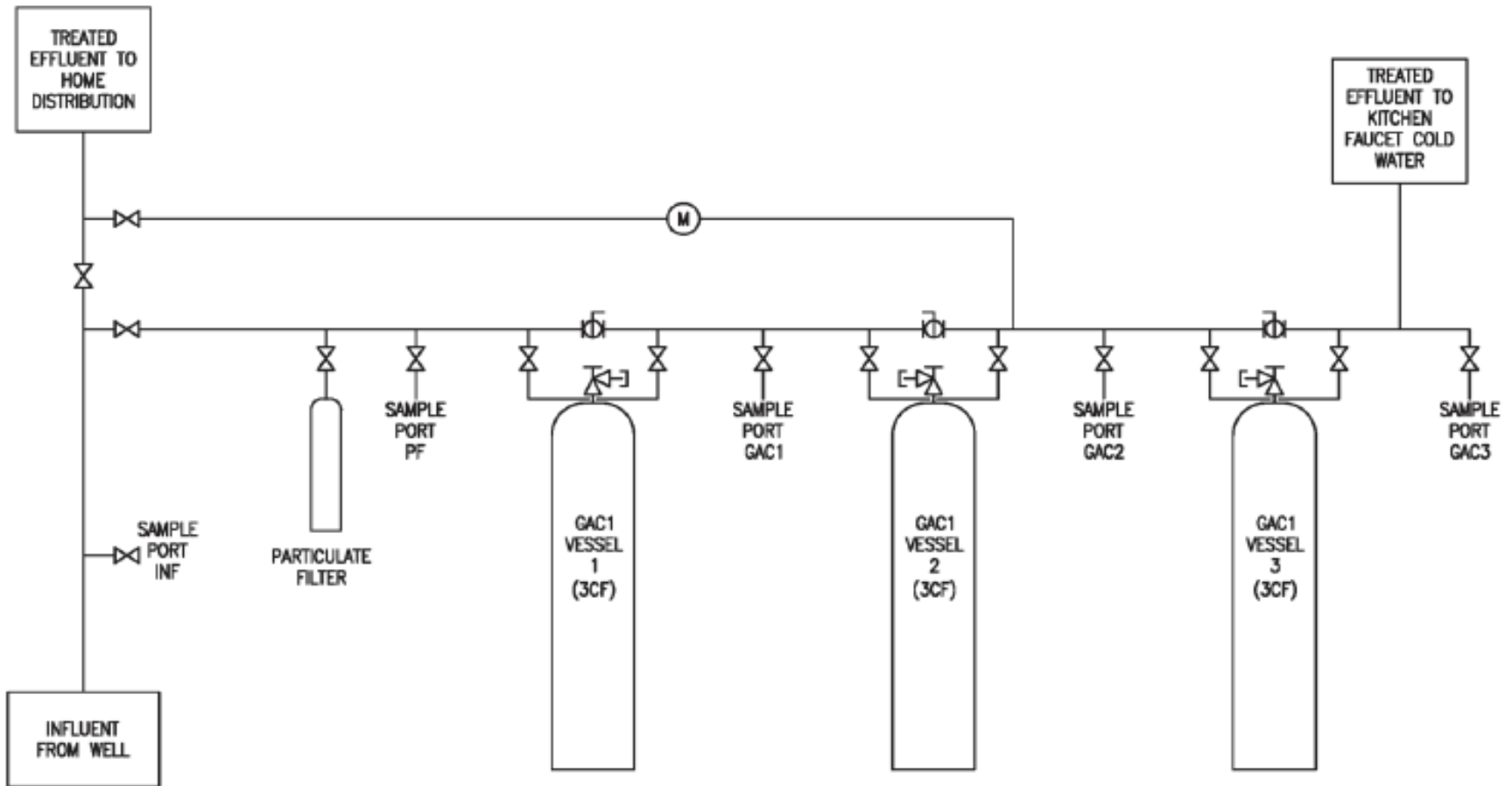
- ▶ Installation of monitoring wells around the facility completed
- ▶ Soil sampling completed/results pending
- ▶ Water quality testing started week of 3/28/2016

## Saint-Gobain On-Site Investigation

# Water Treatment

- ▶ NHDES developed a PFC Treatment Factsheet
- ▶ Need to pay attention to “traditional contaminants”
- ▶ A lot of information being shared from Hoosick Falls, homeowners & water treatment companies
- ▶ Factsheet will be revised week of 4/11 to include
  - Links to certification companies for point of use
    - <http://info.nsf.org/Certified/dwtu/>
    - <https://www.wqa.org/Find-Products#/>
  - Expanded information on point-of-entry treatment
    - Typical design
    - Costs
    - Radon build-up in Granular Activated Carbon info.
- Many water quality mitigation options are currently being assessed by NHDES and water suppliers

# Typical Design of a Point of Entry for a Home



Available information suggests treatment systems with two (2 cubic foot) granular activated carbon vessels may be adequate. Pease system have three (3 cubic foot)



# **Variability, Enhanced Water Delivery, and** **Crop Discussion**

Clark Freise  
Assistant Commissioner

- Current well-to-well
- Seasonal changes
  - Melting upper layers
  - Melt and seasonal recharge
- Change in draw patterns

- Test and retest
- Remove the risk
  - Short term
  - Long term

# Enhanced Water Delivery

- Any properties on well water in the 1-mile investigation area and the following streets:
  - Courtland Avenue
  - Lance Ave
  - Jeff Lane
  - Mike Lane
  - Ronisa Avenue
  - Ivy Way
  - Robyn Avenue
  - Acorn Way
  - Oak Drive
  - Sybil Lane
  - Garden Drive
  - 381 – 450 Charles Bancroft Hwy
    - (north of Midway Ave. and south of Strawberry Lane)



# Expanded Water Delivery

- Monadnock Mountain Spring Water is our partner
- Water has been tested: Non-Detect for all PFCs
- Home delivery will be established in the next 30-60 days
- First month's supply needs to be picked up:
  - Sunday 9am – 4 pm or Monday 12noon – 7 pm
  - Litchfield Transfer Station/Recycling Center
  - Bring your Driver's License
  - 10 cases is about 500 pounds
- If you cannot physically manage
  - Call 603-271-9461 and give them your information
  - We will attempt to deliver to your home Sunday/Monday

# PFOA Uptake in Crops

- Uptake rates vary by plant species
- Higher PFOA soil concentration = Greater uptake in plants
- PFOA compartmentalizes in plants (edible vs. non-edible portion)
- Higher PFOA uptake in agricultural crops such as wheat, oats, corn occurs in non-edible plant portion (stalks, leaves, silk)





# Home Gardening

- ▶ PFOA is a relatively large perfluorinated compound and has a lower uptake rate in plants than other PFCs
- ▶ PFOA absorption in garden produce varies by type of plant
- ▶ Root vegetables and leafy green vegetables (ex. lettuce) generally have greater absorption of PFOA
- ▶ Soil particles tend to adhere to surfaces of root and leafy vegetables
- ▶ Washing surfaces of these vegetables with clean water is recommended to reduce PFOA exposure
- ▶ We are working on a more specific Fact Sheet



# Information/Communication

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- Southern NH PFOA Investigation Website:
  - <http://des.nh.gov/organization/commissioner/pfoa.htm>
- Handouts (all available on the Investigation website)
  - EPA PFOA Fact Sheet
  - Well Testing Information
  - Water Treatment Options Fact Sheet
  - Blood Testing Fact Sheet



# Questions and Answers (written)

John Regan



## Questions and Answers (verbal)

John Regan